

IN THE CLAIMS:

Please amend claims 1-34 as follows.

1. (Currently Amended) A method for signal processing in a receiver ~~and/or~~ in a transmitter of a radio system, ~~characterized by~~ comprising:

first determining (402) for different circuit arrangement nodes at least one operation to execute,

second determining (404) one or more division criteria for signal classes for dividing signals or signal components,

dividing (406) at least one of the signals or signal components according to the one or more division criteria for signal classes,

executing (408) the predetermined operations in the circuit arrangement nodes signal-classwise.

2. (Currently Amended) A method for signal processing in a receiver ~~and/or~~ in a transmitter of a radio system, ~~characterized by~~ comprising:

first determining (402) for different circuit arrangement nodes at least one operation to execute and selecting a modification level from the circuit arrangement, merging the selected modification level nodes and deleting irrelevant nodes and links between the nodes and/or adding new links,

second determining (404) one or more division criteria for signal classes for dividing the signals or signal components,

dividing (406) at least one of the signals or signal components according to the one or more division criteria for signal classes,

executing (408) the predetermined operations in the circuit arrangement nodes signal-classwise.

3. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or~~ 2, ~~characterized in that~~ wherein the circuit arrangement is at least substantially in accordance with a combined tree structure such that at least one tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and in which circuit arrangement one or more nodes of different branches is connected in a predetermined manner.

4. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or~~ 2, ~~characterized in that~~ wherein the circuit arrangement is at least substantially in accordance with a centralized loop such that at least two subtrees are connected to the loop, of which subtrees at least one subtree performs the tasks of radio-frequency parts and at least one second subtree performs the tasks of baseband parts.

5. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or~~ 2, ~~characterized in that~~ wherein the signals or the signal components transfer packet-form data and the signal classes are indicated in the packet header.

6. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or~~ 2, ~~characterized in that~~ wherein the nodes perform the tasks of the radio-frequency parts or the baseband parts.

7. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or~~ 2, ~~characterized in that~~ wherein the circuit arrangement enables transfer of feedback information.

8. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein signals to be modulated in different manners in one or more baseband nodes are divided into different signal classes.

9. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein data can be transmitted from the nodes to one node (unicast) or a plurality of nodes (multicast or broadcast).

10. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein network traffic load is monitored signal-classwise.

11. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the signal classes constitute a hierarchic signal class system, which class system comprises one or more levels.

12. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein inter-node links have a maximum capacity, within which the number and type of the transmitted signal classes can be altered.

13. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the quality class is taken into account when the signal is clipped.

14. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the signal power is measured quality-classwise.

15. (Currently Amended) [[A]] The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the signals having different requirements for modulation accuracy are divided into different signal classes.

16. (Currently Amended) ~~[[A]]~~ The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the signals are divided into different signal classes after of at least one of the following: spatial, temporal and/or frequency-level preprocessing pre- processing.

17. (Currently Amended) ~~[[A]]~~ The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the signals are divided into different signal classes after interference cancellation pre-processing preprocessing.

18. (Currently Amended) A circuit arrangement for signal processing in a receiver ~~and/or in a~~ transmitter of a radio system, ~~characterized in that~~ the circuit arrangement comprising:

circuit arrangement nodes ~~(304, 306, 308, 310, 312, 314, 316, 318, 320, 322)~~
arranged to perform at least one operation,

~~the circuit arrangement comprises means (304, 306, 308, 310, 312, 314, 316, 318,~~
~~320, 322, 326)~~ for dividing at least one of the signals or signal components according to
one or more predetermined division criteria for signal classes,

~~the circuit arrangement comprises means (304, 306, 308, 310, 312, 314, 316, 318,~~
~~320, 322)~~ for performing predetermined operations signal-classwise.

19. (Currently Amended) ~~[[A]]~~ The circuit arrangement as claimed in claim 18, ~~characterized in that~~ wherein the circuit arrangement is at least substantially in accordance with a combined tree structure such that at least one tree branch performs transmitter tasks and at least one second branch performs receiver tasks, and in which

circuit arrangement one or more nodes of different branches ~~is~~ are connected in a predetermined manner.

20. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ wherein the circuit arrangement is at least substantially in accordance with a centralized loop such that at least two subtrees are connected to the loop, of which subtrees at least one subtree performs the tasks of radio-frequency parts and at least one second subtree performs the tasks of baseband parts.

21. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ wherein the signals or the signal components transfer packet-form data and the signal classes are indicated in the packet header.

22. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ wherein nodes (304, 306, 308, 310, 312, 314, 316, 318, 320, 322) perform the tasks of radio-frequency parts or baseband parts.

23. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that the circuit arrangement enables transfer of~~ further comprising means for transferring feedback information.

24. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that the circuit arrangement comprises~~ further comprising means (608, 614) for dividing the signals to be modulated in different manners into different signal classes.

25. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ further comprising means for transmitting data from nodes (304,

~~306, 308, 310, 312, 314, 316, 318, 320, 322)~~ data can be transmitted to one node (unicast) or a plurality of nodes (multicast or broadcast).

26. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ further comprising means for monitoring network traffic load is ~~monitored~~ signal-classwise.

27. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ wherein the signal classes constitute a hierarchic signal class system, which class system comprises one or more levels.

28. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ wherein links between nodes (~~304, 306, 308, 310, 312, 314, 316, 318, 320, 322~~) have a maximum transfer capacity, within which the number and type of the transferred signal classes can be altered.

29. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ further comprising means to take into account the quality class is ~~taken into account~~ when the signal is clipped.

30. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ further comprising means for measuring the signal power is ~~measured~~ quality-classwise.

31. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that~~ further comprising ~~the circuit arrangement also comprises~~ a control unit (~~534~~), which controls the division into signal classes.

32. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that the circuit arrangement comprises~~ further comprising means (304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 326) for dividing signals having different requirements for modulation accuracy into different signal classes.

33. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that the circuit arrangement comprises~~ further comprising means (304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 326) for dividing signals into different signal classes after of at least one of the following: spatial, temporal ~~and/or~~ frequency-level ~~preprocessing~~ pre-processing.

34. (Currently Amended) [[A]] The circuit arrangement as claimed in claim 18, ~~characterized in that the circuit arrangement comprises~~ further comprising means (304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 326) for dividing signals into different signal classes after interference cancellation ~~preprocessing~~ pre-processing.